

REMARKS

The withdrawal of method claims 34 to 36 and 38 from consideration on the grounds that the subject matter is patentably distinct (35 USC 121) from the remaining pending claims is acknowledged. The non-elected claims have been canceled to advance prosecution.

Claim 20 has been amended in a sincere attempt to place the case in condition for allowance. That claim now recites the species of claims 26, 27, and one of the species of claim 29 as the liquid crystal material. The claims before the Examiner are thus claims 20 to 24, 28, 30 to 33, and 37.

The rejection of claims 20 to 28, 30 to 33, and 37 under 35 USC 102 or 35 USC 103 over Hanna et al. '787 is respectfully traversed. The undersigned states that the subject matter of Hanna et al. '787 and the claimed invention were at the time of the latter owned by the same entity, namely Dai Nippon Printing Co., Ltd., the record owner by assignment of both Hanna et al. '787 and the instant application. The Examiner will note that the present case was filed after November 29, 1999. Thus, Hanna et al. '787 is not prior art here. The rejection should be withdrawn.

Applicants also respectfully traverse the rejection of claim 29 under 35 USC 103 as unpatentable over Hanna et al. '787 in view of Eidenschink et al. '305 because as established above, Hanna et al. '787 is not available as de jure prior art in this case.

The rejection of claims 20 to 25, 30 to 33, and 37 under 35 USC 102 or 35 USC 103 as obvious over Yoshida et al. '108 is moot in view of the incorporation into claim 20 of subject matter of claims not so rejected.

The rejection of claims 26 to 28 under 35 USC 103 as unpatentable over Yoshida et al. '108 in view of Hanna et al. '787, if applied to claims 20 and 28, is respectfully traversed. Hanna et al. '787 is not de jure prior art here.

The rejection of claim 29 under 35 USC 103 as unpatentable over Ishida et al. '108 in view of Eidenschink et al. '305, if applied to claim 20 as amended, is respectfully traversed. The species mentioned by the Examiner in the Office Action is no longer present in any claim. The rejection should be withdrawn as well.

In view of the foregoing revisions and remarks, it is respectfully submitted that claims 20 to 24, 28, 30 to 33, and 37

Serial No. 09/477,725

are in immediate condition for allowance and a USPTO paper to those ends is earnestly solicited.

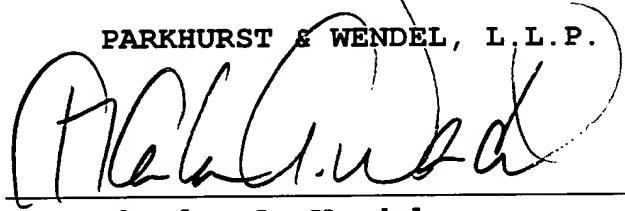
The Examiner is requested to telephone the undersigned if additional changes are required in the case prior to allowance.

Respectfully submitted,

PARKHURST & WENDEL, L.L.P.

March 10, 2003

Date



Charles A. Wendel
Registration No. 24,453

CAW/ch

Attorney Docket No.: DAIN:540

PARKHURST & WENDEL, L.L.P.
1421 Prince Street, Suite 210
Alexandria, Virginia 22314-2805
Telephone: (703) 739-0220

Version with Markings to Show Changes Made

15

liquid crystal is 2-(4'-octylphenyl)-6-dodecyloxynaphthalene, 2-(4'-octylphenyl)-6-butyloxynaphthalene, and 2-(4'-decylphenyl)-6-nonyloxynaphthalene.

15. (New) The information recording medium according to claim 14, wherein the phenylnaphthalene liquid crystal is 2-(4-octylphenyl)-6-dodecyloxynaphthalene.

16. (New) The information recording medium according to claim 1, wherein the liquid crystal material is 2-4'-heptyloxy-4'-octylbiphenyl.

17. (New) The information recording medium according to claim 1, wherein the liquid crystal material is a phenylbenzothiazole liquid crystal.

18. (New) The information recording medium according to claim 17, wherein the liquid crystal material is 2-(4'-heptyloxyphenyl)-6-dodecylthiobenzothiazole.

19. (New) The information recording medium according to claim 1, wherein the liquid crystal material is 4-heptyloxy-4'-dodecylbiphenyl or 4-hexyloxy-4-butanoylbiphenyl.

20. (Amended) An information recording medium comprising:

a pair of electrodes;

5 a liquid crystal material filled into a gap between said electrodes, the liquid crystal material comprising a rod-shape liquid crystal compound,

said liquid crystal material having a property such that charge-transport properties are varied according to a phase transfer between a plurality of stable liquid

Version with Markings to Show Changes Made

16

crystal phases of the liquid crystal and/or a history of the phase transfer, the phase transfer of the liquid crystal material occurring upon a change in temperature of the liquid crystal material between a crystalline 5 phase at a room temperature to an isotropic phase in a final state through a smectic phase at an elevated temperature,

(part 2 of 4)

10 said liquid crystal material comprising a material selected from the group consisting of a
 (27) phenylbenzothiazole liquid crystal, 4-hexyloxy-4-
 25 butanoylbiphenyl, and a phenylnaphthalene liquid crystal
 wherein the phenylnaphthalene is one selected from the
 group consisting of 2-(4'-octylphenyl)-6-
 (26) dodecyloxynaphthalene, 2-(4'-octylphenyl)-6-
 15 butyloxynaphthalene, 2-(4'-octylphenyl)-6-
 nonyloxynaphthalene and a mixture thereof, (26)

20 a thickness of the gap between the electrodes being larger than a domain size of the liquid crystal compound at least in the initial state of the liquid crystal material, and

the thickness of the gap between the electrodes being smaller than a domain size of the liquid crystal compound in a cooled state from the isotropic phase in a final state.

25

21. (New) The information recording medium

Version with Markings to Show Changes Made

octylphenyl)-6-butyloxynaphthalene, 2-(4'-octylphenyl)-6-nonyloxynaphthalene and a mixture thereof.

27. (New) The information recording medium
5 according to claim 20, wherein the liquid crystal
material is a phenylbenzothiazole liquid crystal.

10 28. (Amended) The information recording medium
according to claim 27 20, wherein the
phenylbenzothiazole liquid crystal material is 2-(4'-
heptyloxyphenyl)-6-dodecylthiobenzothiazole.

15 29. (New) The information recording medium
according to claim 20, wherein the liquid crystal
material is 4-heptyloxy-4'-dodecylbiphenyl or 4-
hexyloxy-4-butanoylbiphenyl.

20 30. (New) the information recording medium
according to claim 20, wherein
the liquid crystal material comprises a liquid
crystalline charge-transport material,
a background for information recording is in a
25 state that the charge-transport properties are inhibited
attributable to polycrystalline structural defects in